

REMARKS

Claims 22-25, 28-29, 31 and 37-42 are pending. Applicant requests continued examination.

Claims 22-25, 28-29, 31 and 37 were rejected under 35 USC § 102(e) as anticipated by U.S. Patent 6,663,587 ("Silver"). Applicant respectfully traverses.

Claim 22 recites "a cup ... having first end fastening to a vacuum line ... that causes a progressive collapse of the cup when a vacuum is drawn at the first end, and the second end is closed by a human breast with teat extending to the first end." The claimed first end which receives the teat is fastened to a vacuum line. Silver fails to show or teach a breast cup having a first end that both receives the teat and fastens to a vacuum line.

In FIG. 9, Silver teaches a breast shield having a first end at catch chamber 350 for receiving a teat, but fails to teach any structure at the first end for fastening to a vacuum line. Valve 352 at the far end of chamber 350 is configured to conduct milk out of chamber 350, not to fasten to a vacuum line. Silver, col. 14, ln. 63-65. In FIG. 9, the vacuum line attaches to a port 326 formed in lid 292B, at a location atop the shield and entirely separate from the first end. Silver, col. 14, ln. 20-34; col. 15 ln. 24-30. This arrangement is structurally different from the breast cup of claim 22. In Silver, the diaphragm "serves to separate the source of vacuum [applied to the interior] from the milk being expressed." Silver, col. 15, ln. 42-43. In the invention of claim 22, both the source of vacuum and the milk being expressed intersect at the first end, resulting in a simpler and more elegant system.

FIGS. 10, 13 and 16 of Silver were also cited in the rejection. Note that each of these embodiments also fails to teach a structure at the first end for fastening to a vacuum line. In FIG. 10, the vacuum line connects to port 388 rather than to first end 407. In FIG. 13, the vacuum line

connects to port 522 rather than to first end 604. And in FIG. 16, the vacuum line connects to port 770 rather than to first end 815. In all embodiments of Silver, the source of vacuum is physically separated from the milk being expressed.

Independent claims 37 and 40 recite similar structure whereby a first end of the breast cup both receives the teat and fastens to a vacuum line. Therefore, all claims in the application, either directly or through dependency, are seen as allowable over Silver.

Claims 22-25, 28-29, 31 and 37 were rejected under 35 USC § 102(b) as anticipated by U.S. Patent 5,885,246 ("Ford"). Applicant respectfully traverses.

Claim 22 recites: a "cup having a wall thickness varying from the first end to the second end in a manner that causes a progressive collapse of the cup when a vacuum is drawn at the first end." The structural character of this limitation is evident when comparing the breast cup of claim 22 to the breast cup taught by Ford.

Ford fails to anticipate a breast cup structure configured to collapse when a vacuum is drawn at the first end. In fact, Ford's breast cup expands when a vacuum is applied to the first end. Upon application of a negative (vacuum) pressure to the first end, pockets 10 are "sucked outwardly into contact with the inner surface of conical portion 2." See Ford at col. 4, ln.17-23; and FIGS. 1-6. Ford does not show or teach the structure of claims 22, 37 or 40, or any dependent claim, as each contains a structural limitation requiring the breast cup to collapse upon application of vacuum to the first end.

On alternative grounds, Ford does not anticipate claim 37 or 40. Each of these claims recites a structural element requiring that the breast cup collapse on, or compress, the teat after a vacuum is applied to the first end. As shown in FIG. 4 of Ford, 14 inner wall 7 of insert 5 never comes into contact with the teat 14. The insert 5 of Ford "is designed to manipulate only the

areola portion of the breast rather than the nipple.” Ford, col. 4 ln. 13-15. Thus Ford does not show or teach claim 37, 40, or any relevant dependent claim.

Claims 22-25, 28-29, 31 and 37 were rejected under 35 USC § 102(e) as anticipated by U.S. Patent Application Publication No. 2002/0193731 (“Myers”). Applicant respectfully traverses.

Each of claims 22, 37 and 40 recite a structural limitation requiring that the wall thickness of the breast cup vary from the first end to the second end in such a way that, when a vacuum is applied at the first end, the cup collapses progressively. More specifically, in claims 37 and 40 the progressive collapse causes the cup wall to collapse first on the areola and then on the teat. This structure enables the collapsible breast cup to mimic the action of a suckling infant, thereby increasing the efficiency of milk expression and providing improved comfort for the nursing mother.

In contrast, Myers fails to teach a breast cup that collapses in such a progressive manner. First, note that Myers’s breast cup is not structured to compress the teat (or nipple): “the nipple is well seated at the back of the breast pump 10 ... where only air is in contact with the nipple.” Myers, paragraph 0062. “When the nipple is placed inside the flange 30, the nipple rests within the vacuum chamber 60 with the surface of the surrounding area of the breast (*i.e. the areola*) in contact with the surface of the flange. Id (emphasis added).

Second, note that Myers teaches a structure that causes uniform (rather than progressive) collapsing of the cup: “In order to strengthen the top 35 and to help in uniformly compressing the vacuum chamber 60, the top 35 may be formed with a circular, reinforcing plate.” Myers, paragraph 0062. Myers shows and teaches a breast cup that uniformly compresses only the

areola portion of the human breast in response to a vacuum applied to the first end. Note that in Myers, the first end is indicated in FIG. 10A by the numeral 60.

Since Myers fails to teach a breast cup configured to progressively collapse, Myers does not anticipate claim 22, 37 or 40. In addition, since Myers fails to teach a breast cup that compresses (or collapses on) the teat, Myers does not anticipate claim 37 or 40.

All amendments made herein are fully supported in the specification and drawings. In particular, see Application at paragraphs 0051-0052 and FIGS. 9-12.

In view of the all of the above, it is respectfully submitted that all pending claims are allowable over Silver, Ford and Myers. Applicant therefore requests that all the claims be allowed and the application passed to issue.

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Very truly yours,

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